

## CANADIAN SCIENTISTS FORCED TO APPROVE UNSAFE DRUGS

The Canadian Government's Health Protection Branch is once again the centre of controversy, with six of its scientists charging they have been pressured to approve drugs of questionable safety.

Activists from the Sierra Club and the Council of Canadians held a news conference recently (16 September), to publicise a case about which scientists are under Health Department orders not to talk to the media.

"The department scientists are being forced to approve drugs not safe for animal and human consumption," said Maude Barlow of the Council of Canadians.

She called for a public investigation of the branch, saying drug companies now provide 70 per cent of its financing and have too much influence over the drug-approval process.

Many of the scientists' concerns centre on bovine growth hormone, a genetically engineered drug manufactured by Monsanto, which increases milk production in dairy cattle. The drug is banned in Europe and is the subject of immense controversy on both sides of the Atlantic.

(Source: *LifeSaveIn@aol.com*, 18 September 1998)



## SKY-EYE TO BUST KIDNAPPERS

Italian dignitaries who fear being kidnapped are having microprocessor devices planted in their bodies so police can track them down if they are abducted.

The microchips, called Sky-Eyes, were originally developed by Israeli researchers for intelligence use, and are sold by a company called Gen-Etics. They are said to be made of "synthetic and organic fibre", and reportedly run on such a small amount of energy that it can be "borrowed" from the human body. The chip is supposed to be invisible to the naked eye and to X-rays.

The Sky-Eye is said by its promoters to have a margin of error of just 150 metres.

(Sources: *The Telegraph, London*; *SMH Online*; 7 October 1998)

## CANADIAN PRISONERS USED AS TEST SUBJECTS

Canadian prisoners were used as human guinea pigs in questionable medical experiments conducted for more than a decade, the *Ottawa Citizen* reports.

An investigation by the *Citizen* and *Southam News* discovered that inmates of federal prisons were commonly used as test subjects throughout the 1960s and into the 1970s. The research was sponsored by drug companies, universities and the federal government, the newspaper reported Saturday (26 Sept.).

The tests involved hundreds of male and female prisoners. They were given unproven pharmaceuticals, were subjects in sensory-deprivation research, and were involved in pain studies employing electric shocks.

Recent revelations of similar experiments performed in the United States two decades ago were met with public furore. (Source: *Vancouver Sun*, 27 Sept. 1998)

## US PRESSURE ON UK TO GROW ENGINEERED CROPS

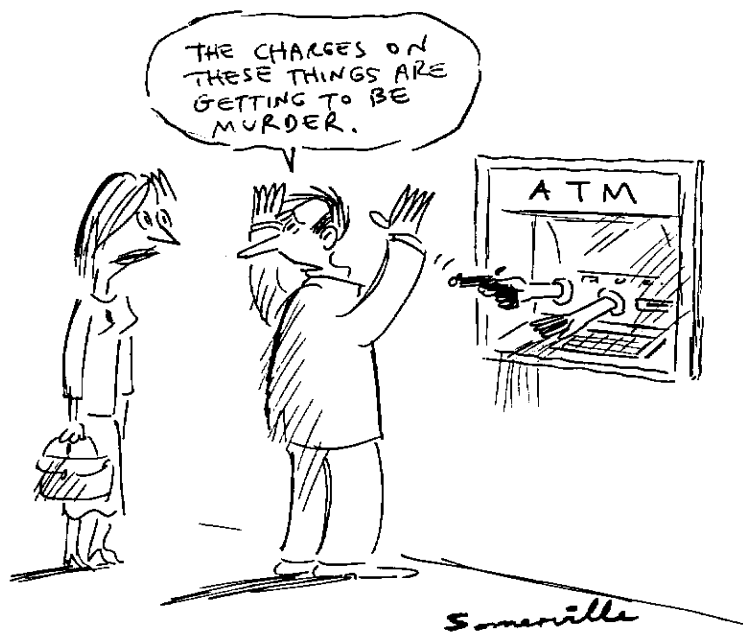
Bill Clinton has personally intervened with Tony Blair to try to stop Britain from halting the controversial production of genetically engineered/modified foods.

The US President telephoned the Prime Minister during the (northern) summer to try to persuade him that genetically modified (GM) crops, worth millions to the US economy, would not be bad for Britain.

Sources close to the Government say that the US President has been pressing Blair to support commercial production of GM crops in Britain, despite growing consumer opposition.

Consumer and environmental groups including *English Nature*, the Government's wildlife advisers, want the Government to introduce a moratorium on growing such crops commercially in the UK for at least three years.

France and Austria have temporarily banned the growth of genetically modified food until more is known about its effects on the environment.



Clinton's intervention has outraged British MPs and environmentalists who accuse the US President of intruding in a sensitive domestic matter.

The Clinton administration has close links with Monsanto, the powerful biotechnology conglomerate which develops seeds for GM crops.

Monsanto, which made a profit of almost US\$300 million (£177 million) in 1997, is one of five companies spearheading Clinton's welfare-to-work program, and the President singled out the biotech company for praise during his 1997 State of the Nation address.

During the 1996 election, Monsanto was among those donating thousands of dollars in 'soft money' (legal funds which are not included in the ban on corporate donations) to the Clinton camp.

Meanwhile, in a package of measures designed to leave the door open to the powerful biotechnology industry and at the same time reassure consumers, the British Government announced in late October that no commercial growing of GM crops would be allowed before autumn 1999.

This is far short of the three-year moratorium called for by environment, health and consumer groups. The government will allow six farms to grow GM crops on a commercial basis under strict ecological monitoring to establish the effects of wide-scale planting. However, the government is to ban commercial growing of insect-resistant crops for three years.

(Sources: The Independent on Sunday, London, 6 September 1998; The Guardian Weekly, w/e 1 November 1998)

## EU DROPS INVESTIGATION INTO 'ECHELON' SPY NETWORK

The European Parliament has swept aside concerns about alleged surveillance and spying activities conducted in the region by the US Government, according to a Green Party representative of the body quoted on Monday (5 October).

Specifically, the EU allegedly scuttled parliamentary debate late last September concerning the *Echelon* surveillance system. *Echelon* is a near-mythical intelligence network operated in part by the National Security Agency.

"The whole discussion was completely brushed over," said Patricia McKenna, a Green Party member of the European Parliament.

The US Government has refused even to

acknowledge *Echelon's* existence. But since 1988, investigative journalists and privacy watchdogs have uncovered details of a secret, powerful system that can allegedly intercept any and all communications within Europe.

The Green Party believes the resolution to defer its decision on *Echelon*, pending further investigation, was influenced by pressure from the US Government which has tried to keep the system secret.

*Echelon* is said to be principally operated by the US National Security Agency and its UK equivalent, the Government Communications Headquarters. It reportedly also relies on cooperation with other intelligence agencies in Canada, Australia and New Zealand.

(Source: by Niall McKay, *Wired News*, www.wired.com, 10 October 1998)

## CRASHED ISRAELI JET CARRIED TOXIC CARGO

Among the substances now known to have burned in the inferno of the Israeli El Al cargo jet, which crashed into an Amsterdam apartment block in 1992, were 800 pounds of depleted uranium and three of the four chemicals needed to make sarin, including about 50 gallons of dimethyl methylphosphonate (DMMP).

As sirens wailed and flashing lights swept the fiery wreckage of the 12-storey block, the 'black box' cockpit voice recorder disappeared from the evidence bin where firefighters insist they put it.

Five hours into the rescue effort, after Dutch security police had cleared the crash site of emergency workers and press, men in white hooded firesuits were seen jumping from a heli-

copter into the smouldering rubble and carrying off debris in unmarked trucks. Police videotapes were erased before investigators had a chance to review them, and vital details of the cargo's hazardous contents were kept secret for years, until recently.

The investigation of the disaster, which took at least 43 lives on the ground and four more aboard the Boeing 747 jet, now looks to be either a monumental bungle or a textbook cover-up.

But if Israeli or Dutch officials conspired to hide the full extent of the risks to which those in the crash area were exposed, they overlooked an important source of evidence: the survivors.

Six years after the crash in the densely populated Bijlmermeer district, at least 1,200 residents and rescue workers are complaining of physical and psychological ailments they fear were caused by something carried in the El Al cargo hold.

With the disclosure this month that the jet carried sarin components, passions have flared among sick residents and their baffled doctors. A Dutch parliamentary inquiry has been ordered to try to discover the truth about the disaster.

(Sources: The Guardian Weekly, London, w/e 11 October 1998; Los Angeles Times, www.latimes.com, 13 October 1998)



## MOLECULAR MEMORY COULD BE TRANSMITTED BY E-MAIL!

French researcher Jacques Benveniste is set to become the first person in history to win two 'Ig Nobel' prizes when this year's awards are announced at a ceremony at Harvard University (8 October).

Benveniste won his first 'Ig'—awarded annually by Marc Abrahams, editor of *The Annals of Improbable Research*, and a group of scientists—for work claiming to show that antibody solutions retain their biological effectiveness, even when diluted to the point where no trace of the antibody is detectable (*Nature* 333:816, 1988). The water, Benveniste argues, preserves a "memory" of the substance after it is gone.

The second Ig Nobel Prize will be awarded to Benveniste for an extension of this work. Benveniste now claims that a solution's biological activity can be digitally recorded, stored on a computer hard drive, sent over the Internet as an attached document, and transferred to a different water sample at the receiving end (see <http://www.digibio.com>).

"We've demonstrated that you can transmit the biological effect by e-mail between Chicago and Paris," says Benveniste, who heads the Digital Biology Laboratory, in Clamart, France, which is financed by the private company DigiBio SA. "With this approach, you could transfer the activity of a drug by means of standard telecommunications technology."

Benveniste says that he is "happy to receive a second Ig Nobel Prize, because it

shows that those making the awards don't understand anything. People don't give out Nobel prizes without first trying to find out what the recipients are doing. But the people who give out Ig Nobels don't even bother to inquire about the work."

(Source: *Nature*, vol. 395, 8 October 1998)

## HEALTH CONCERNS PROMPT CALL TO REDUCE PESTICIDE USE

Nicholas Ashford, Professor of Technology and Policy at Massachusetts Institute of Technology, says he thinks chemicals are the most serious environmental problem facing industrialised countries today.

Professor Ashford, who is also an adviser to the United Nations Environment Program, is known for his work on the theory of multiple chemical sensitivity (MCS). The theory suggests people can become sensitised by exposure to one form of contamination so that they are then liable to be affected by a whole range of other pollutants, including detergents, traffic fumes and tobacco smoke.

Organophosphates (OPs) may be one of the most common initiators of MCS, according to Professor Ashford. OPs are used in sheep dip, shampoos and flea collars and are also used for fumigating public transport vehicles.

Prof. Ashford said, "Pesticides are nerve poisons; they damage the brain and they are also known to be endocrine disruptors [synthetic chemicals which interfere with naturally produced hormones]."

Professor Ashford believes that the huge rise in pesticide use over the last half-century could explain many illnesses, ranging from skin rashes and breathing problems to cancers and birth defects. He wants to see an immediate reduction in pesticide use until the effects are better understood, and is pressing for the formation of an EU environment unit to study the problem.

(Source: by Alex Kirby, *BBC Online Environment Correspondent*, 10 Oct 1998)

## PULP FRICTION: THE ECOLOGIST vs MONSANTO

The *Ecologist*, the flagship of the green movement in the UK for the past 30 years, has become involved in a row with its printers after an edition of the magazine was pulped.

The journal had used the edition to attack transnational Monsanto's biotechnology and genetic engineering practices, including the so-called Terminator Technology (see article this issue). But the *Ecologist's* printers of 29 years—Penwells of Saltash, Cornwall—destroyed the 14,000-copy print run without notice. The printers refused to comment on their decision, but it is understood that the company was afraid of laying itself open to a libel action.

Daniel Verakis, UK spokesman for Monsanto, admitted that although he knew that the issue of the *Ecologist* was a special one on biotechnology, Monsanto had nothing to do with influencing the printers to pulp the magazine.

(Source: *Guardian Weekly*, London, w/e 4 October 1998)

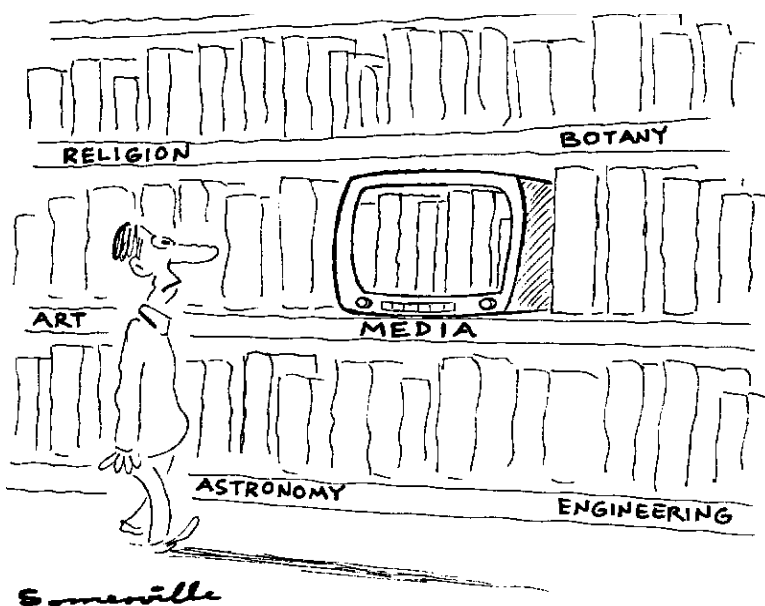
## SANITY CLAUSE FOR VETTING BRITISH SPOOKS

Britain's spies are to be vetted by psychologists to assess whether they can be entrusted with national secrets. The move reflects growing concern about mentally unstable agents.

Under proposals from the House of Commons security watchdog, members of MI6, MI5 and other agencies would be forced to undergo regular psychological tests to spot potential personality disorders.

The House of Commons Intelligence and Security Committee is also considering more exacting staff scrutiny and "more stringent controls on appointments to particularly sensitive posts".

Harold Macmillan once said that anyone who spent more than 10 years in the world of spies must be either weird or mad.



History is full of examples. The first chief of MI6, Sir Mansfield Cumming, wore a gold-rimmed monocle, wrote only in green ink and trundled around his office on a child's scooter. Kim Philby, the most successful double agent of the post-war era, was described by a colleague as "a schizophrenic with a supreme talent for deception". The defector George Blake, imprisoned in 1961 for spying on behalf of the Soviets, admitted he often looked in the mirror and wondered who he was.

The problems are even worse in the Central Intelligence Agency (CIA) if Jeanine Brookner, its first woman station chief, is to be believed. In court four years ago, she claimed that CIA officers "would either be busy sleeping with each other's wives, drunk, taking drugs, fiddling their expenses, seeing the agency psychiatrist or perhaps doing them all at once".

(Source: by David Connett and Jonathan Calvert, *The Observer*, London, 26 October 1998)

## FROM A FIELD NEAR YOU... ESCAPE OF THE TRANSGENES!

Heightening environmentalists' fears about the dangers of genetic engineering, a weed altered by scientists to resist a herbicide has also developed a far greater ability to pollinate other plants and pass on its traits.

Joy Bergelson, a professor of ecology and evolution at the University of Chicago, said the findings show that genetic engineering can substantially increase the chances of 'transgene escape'—the spread of certain traits from one plant to another. Her co-authored study has been published in the journal *Nature* (vol. 395, 3 Sept 1998).

Charles Margulis of Greenpeace said the results confirm fears that genetically engineering cotton and soybeans to survive spraying with herbicides to make weed-control easier, will force farmers to spray heavier doses of herbicides or use types that are less environmentally safe.

"It's just another chink in the armour of the industry, which keeps saying environmentalists' claims of health concerns just aren't justified," Margulis said.

Scientists have already recognised that when a genetically engineered crop grows near a weed relative, the gene-engineered trait will eventually transfer to the weed.

(Source: by Jeff Barnard, *Associated Press*, 2 September 1998)

## PHARMACEUTICAL DRUGS POLLUTE OUR WATER

A new class of water pollutant has been discovered during the past six years. Pharmaceutical drugs (including antibiotics, hormones, strong painkillers, tranquillisers, and cancer chemotherapy chemicals) given to people and to domestic animals, are being measured in surface water, in groundwater and in drinking water at the tap. Large quantities of drugs are excreted by humans and domestic animals, and are distributed into the environment by flushing toilets and by spreading manure and sewage sludge onto and into soil.

German scientists report that anywhere from 30 to 60 drugs can be measured in a typical water sample—if anyone takes the time to do the proper analyses (*Science News* 153[12]:187-189, 21 Mar. 1998). The concentrations of some drugs in water are comparable to the low parts-per-billion (ppb) levels at which pesticides are typically found. Some people find this reassuring, but others are asking: "What is the long-term effect of drinking, day after day, a dilute cocktail of pesticides, antibiotics, painkillers, tranquillisers and chemotherapy agents?" Of course, no one knows the answer to such a question. It is simply beyond the capabilities of science to sort out the many chemical interactions that could occur in such a complex chemical soup.

The first study that detected drugs in sewage took place at the Big Blue River sewage treatment plant in Kansas City, USA, in 1976. The problem was duly recorded in scientific literature (*Life Sciences* 20[2]:337-341, 15 Jan. 1997) and then ignored for 15 years. In 1992, researchers in Germany were looking for herbicides in water when they kept noticing a chemical they couldn't identify. It turned out to be clofibric acid (CA), a drug used by many people in large quantities to reduce cholesterol levels in the blood. Clofibric acid is a close chemical cousin of the popular weed-killer, 2,4-D.

Since 1992, researchers in Germany, Denmark and Sweden have been measuring levels of CA and other drugs in rivers, lakes and the North Sea. To everyone's surprise, it turns out that the entire North Sea contains measurable quantities of clofibric acid. Based on the volume of the sea, which is 12.7 quadrillion gallons, and the average concentration of CA, which is 1 to 2 parts per trillion (ppt), researchers estimate that the North Sea contains 48 to 96 tons of clofibric acid (*Environmental Science and Technology* 32[1]:188-192, 1998).

The Danube River in Germany and the Po River in Italy also contain measurable quantities of clofibric acid. Of more immediate concern to humans is the finding that tap water in all parts of the city of Berlin contains clofibric acid at concentrations between 10 and 165 ppt. The water supplies of other major cities remain to be tested.

Drugs are designed to have particular characteristics. For example, 30 per cent of the drugs manufactured between 1992 and 1995 were lipophilic (*Chemosphere* 36[2]:357-393, 1998). This means that the drugs tend to dissolve in fat but not in water, and this gives them the ability to pass through cell membranes and act inside cells. Unfortunately it also means that, once they are excreted into the environment, they enter food chains and concentrate as they move upward into larger predators. Many drugs are also designed to be persistent so that they can retain their chemical structure long enough to do their therapeutic work. Unfortunately, after they are excreted, such drugs also tend to persist in the environment. A landfill used by the Jackson Naval Air Station in Florida contaminated groundwater with a plume of chemicals that has been moving slowly underground for more than 20 years. The drugs pentobarbital (a barbiturate), meprobamate (a tranquilliser sold as Equanil and Miltown) and phensuximide (an anticonvulsant) are still measurable in that groundwater plume (*Chemosphere*, *ibid.*)

When a human or an animal is given a drug, anywhere from 50 to 90 per cent of it is excreted unchanged. The remainder is excreted in the form of metabolites—chemicals produced as by-products of the body's interaction with the drug. Researchers report that some of the metabolites are more lipophilic and more persistent than the original drugs from which they were derived (*Chemosphere*, *ibid.*)

Another problem resulting from drugs in the environment is bacteria developing resistance to antibiotics. The general problem of antibiotic-resistant bacteria has been recognised for more than a decade. Antibiotics are only useful to humans so long as bacteria do not become resistant to their effects. Bacteria exposed to antibiotics in sewage sludge or water have an opportunity to develop resistance.

(Source: by Peter Montague, *Rachel's Environment & Health Weekly*, no. 614, 3 September 1998; PO Box 5036, Annapolis, MD 21403, USA; tel (410) 263 1584; fax (410) 263 8944; e-mail, erf@rachel.org; for transcript, see [www.monitor.net/rachel/](http://www.monitor.net/rachel/))